CALIFORNIA'S RESPONSE

TO THE FEDERAL ENERGY REGULATORY COMMISSION

STAFF REPORT ON HYDROELECTRIC LICENSING POLICIES, PROCEDURES, AND REGULATIONS – COMPREHENSIVE REVIEW AND RECOMMENDATIONS PURSUANT TO SECTION 603 OF THE ENERGY ACT OF 2000 – MAY 2001

Submitted By:

CALIFORNIA RESOURCES AGENCY

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 2001

Table of Contents

EXECUTIVE SUMMARY

The California Resources Agency and the California Environmental Protection Agency (collectively, "California") provide their response to, and comments regarding, the Federal Energy Regulatory Commission's ("FERC") "Report On Hydroelectric Licensing Policies, Procedures, And Regulations – Comprehensive Review And Recommendations Pursuant To Section 603 Of The Energy Act Of 2000" ("603 Report"), May 2001.

A. California Is Working Aggressively and Creatively To Resolve Its Electricity Supply, Demand And Market Troubles

California has taken bold and creative actions to resolve the electricity supply shortages, demand levels and market dysfunction that have impacted the state since market deregulation in 1996. These actions are being implemented in three broad categories that correspond to the major points of California's energy plan to increase supply, reduce demand, and stabilize California's electricity market. They include:

1. Licensing more than 30 power plants with a combined capacity of over 11,000 MW representing more than $5.1 billion in investment;
2. Conducting environmental review on an additional 8,000 MW of new power generation;
3. Creating new, streamlined powerplant-licensing procedures;
4. Embarking on the most ambitious and successful residential, commercial and industrial energy efficiency investment program in California history. California has dispensed over $300 million for conservation measures over the past year that produced a monthly reduction of 5,570 MW peak use (14.1% reduction) and 2.7 million MWhr energy use (12.4% reduction) in June 2001;
5. Addressing natural gas supply shortages through market intervention and transmission capacity expansion;
6. Creating a new California Power Authority with a $5 billion operating fund and a legislative mandate to stabilize market conditions; and
7. Promoting renewable energy technologies to diversify California's electricity supply mix. California has awarded $200 million in renewable power purchase contracts that will spur development of more than 1,000 MW of renewable energy in the next five years.

With hydropower, California has been working to promote alternative hydro technologies that can expand the capacity of this electricity resource without damaging rivers and streams. Hundreds of dams and canals within California's extensive water supply system have the potential to support this new generation of alternative hydro technologies.

California also worked cooperatively with FERC and California hydro producers in response to FERC's March, 2001 Order "Removing Obstacles to Increased Electric Generation and Natural Gas Supply in the Western U.S." (EL01-47-000) to rapidly evaluate proposals to increase hydroelectricity production by changing environmental standards. As is documented in this response, relicensing existing hydropower projects to improve environmental quality is distinct and nearly unrelated to California's aggressive, creative and successful efforts to alleviate the recent electricity supply shortages.

B. California Disagrees With The Analyses, Conclusions, And Recommendations In The 603 Report.

Congress directed FERC to conduct a comprehensive review of hydropower licensing practices and procedures and to identify measures to reduce the time and cost of obtaining a hydropower project license. California supports reforming hydropower relicensing by making it more administratively efficient. California opposes FERC staff's recommendations in the 603 Report because they do not address the important causes of delay, would usurp California's (and other states') authority to administer the Clean Water Act, and would diminish environmental protection.

Moreover, the 603 Report is not consistent with Congress' direction. Instead of undertaking a comprehensive review of hydropower licensing to recommend ways to avoid unnecessary costs and delays, including a hard look at the effect of FERC's policies and procedures, it appears that FERC staff have attempted to use the 603 Report as an opportunity to consolidate their authority at the expense of the states, and at the expense of water quality.

FERC has missed an important opportunity to work cooperatively with the states to develop relicensing reforms that meet state and federal objectives. FERC would have better served their charge from Congress by reaching out to California and other states in developing their analyses and recommendations.

FERC's staff's 603 Report is fundamentally flawed in its logic, and mistaken in its conclusion that independent environmental conditioning authorities, such as section 401 of the Clean Water Act as administered by the states, cause undue delays in hydropower relicensing. In California's experience, the longest delayed licensing proceedings do not involve water quality certification issues. FERC finds that a median 43-month period for relicensing is onerous. Considering the complexity of the issues involved in relicensing and the environmental benefits of bringing antiquated hydropower projects into conformity with current environmental laws, a 43-month review period may not be unreasonable. The facts and analyses do not support FERC's radical recommendation to assume "final decisional authority over all relicensing conditions and processes." Independent assessments by the General Accounting Office and Department of Interior reach the same conclusion.

The 603 Report recommends legislation that would eviscerate the states' authority under section 401 of the Clean Water Act. In taking this approach, FERC staff exhibits substantial disregard for, or misunderstanding of, the vital, congressionally delegated role of states in requiring that hydropower projects comply with the Clean Water Act. The 603 Report recommendation would undermine the broad public interest in establishing conditions as part of the relicensing process to address the degradation of the nations' rivers by hydropower projects licensed before Congress enacted modern environmental laws.

C. The Relicensing Stakes In California Are High.

Forty-four of the 119 FERC-licensed projects in California, including most of the large capacity projects, will be relicensed in the next 15 years. Sixty percent of the state's entire 14,116 MW hydropower system was built and licensed prior to the 1970's when modern environmental statutes were enacted. Many hydropower projects are operating under licenses with little are no conditions for environmental protection. Consequently, many California hydropower projects will be required to comply with environmental standards for the first time through relicensing. This is an important, once-in-a-generation, opportunity to alleviate environmental damage caused by hydropower production. It is also a unique opportunity to review ways and means of increasing the power production efficiency of existing hydro facilities through new technology.

D. California Has Taken Action To Improve Hydropower Project Relicensing.

California has worked to improve hydropower project relicensing. The State's efforts include:

- Amending the California Code of Regulations to create an appeals process for Clean Water Act section 401 conditions;

- Amending the California Water Code to expedite water rights processing for small hydropower projects; and

- Committing significant staff resources to the numerous traditional and alternative relicensing proceedings underway in California.

E. FERC's Proposals Would Undermine States' Authority To Administer The Clean Water Act.

Section 401 of the Clean Water Act provides for state water quality certification of federal permits and licenses. Section 401 is consistent with the principles of cooperative federalism embodied in the Clean Water Act, under which states have a primary role in establishing and implementing water quality requirements. Congress clearly intended section 401 to apply to FERC relicensing. The states' authority to require water quality certification for FERC licenses has been repeatedly upheld by the courts, including the United States Supreme Court in *PUD No. 1 v. Washington Department of Ecology* (1994) 511 U.S. 700.

Water quality control requirements need to be applied within a context of comprehensive planning, and must address all sources of pollution that may affect a body of water. This has long been the focus of California's water quality program, which provides for water quality control plans that address all sources of pollution, both point and nonpoint source. Watershed planning is a management approach for more effectively protecting water quality and restoring aquatic ecosystems and protecting human health. Using the watershed approach, California addresses all impairments to aquatic systems, including damage to aquatic life and habitat, loss of wetlands and stream corridor degradation. States also regulate the water development projects (e.g., irrigation and municipal supply projects) that affect the same water bodies as FERC-licensed projects but that are exempt from FERC regulation, including federally operated hydropower projects. States

are clearly in a much better position than FERC to address the impacts of hydropower projects within a context of comprehensive planning.

FERC's proposal to limit state water quality certification to "chemical and physical water quality parameters" is an attempt to revive a long discredited argument that the Clean Water Act should address only water chemistry, to the exclusion of broader water quality concerns, including instream flows and protection of aquatic habitat. This argument is contrary to the express language of the Clean Water Act. California has long recognized, through both legislative policy and in activities like the state's Bay/Delta programs, the close relationship between water quantity and water quality.

F. The Unexamined Reasons Behind Relicensing Delays.

FERC ignores its own responsibility for relicensing delays. The ease with which FERC grants annual license extensions when licenses expire creates an incentive for project operators to delay the licensing process and avoid the responsibilities and costs of operating a hydropower project under modern environmental protection conditions. Two California hydropower projects have been operating under annual license extensions for 25 and 18 years, respectively.

FERC's convoluted licensing procedures, its failure to actively manage relicensing proceedings, and its past reluctance to act cooperatively with other agencies having authority over hydropower projects are also major sources of delay. Problems caused by FERC policies and procedures include:

- **Illogical Relicensing Sequencing:** Current FERC regulations require that applicants request water quality certification *before* filing an application for relicensing, which means that the state must act on a request for certification *before* environmental documentation and other key studies required for FERC relicensing are prepared. As a result, certification may be denied or delayed pending completion of necessary studies.

- **Lack of Firm FERC Deadlines for Study Completion:** Baseline scientific studies that provide data on hydrology, fish populations, recreation use and values, and water quality are an essential part of the relicensing process. In California's experience, FERC often does not require applicants to complete in a timely manner the agency-requested studies that were specified as part of the first and second stage consultation requirements.

- **Lack of FERC Deadlines for NEPA Completion:** In California's experience, FERC makes no commitment to provide schedules for completion of its Draft or Final NEPA documents.

- **Unwillingness to Prepare Joint State/Federal Environmental Documents:** FERC is resistant to the preparation of state/federal joint environmental documents as required by the President's Council on Environmental Quality ("CEQ") NEPA guidelines.

G. Hydropower Is an Important Part of California's Electricity Supply System That Is Not Significantly Affected By Relicensing.

Hydropower plays an important role in California's electricity supply mix by providing power that is low cost and emissions free. Hydropower's most important attribute in California is its flexibility in meeting peak demands during summer high load periods. However, California's current energy supply problems were not caused by the FERC hydropower relicensing process, nor by California's exercise of its authority to condition licenses for the protection of beneficial uses of its rivers. There is almost no correlation between relicensing and changes in hydropower production levels. The 603 Report documents that changes in electricity production associated with project relicensing are negligible. FERC staff finds that: "[T]he average annual generation loss, attributed largely to increased flows to protect aquatic resources, was 1.58%, while the average installed capacity increased 4.06%." This is consistent with our experience in California.

Hydropower production in California varies widely depending on weather cycles and hydrologic conditions. Depending on the weather cycle, hydropower can account for 10% to 25% of California's annual in-state sales. Prior to market deregulation in 1996, California energy planners would only depend on dry-year production levels in forecasting hydropower peaking reserves because the annual weather-caused fluctuation in production was too great on a year to year basis. California hydropower is an important but fickle part of its electricity supply mix. These wide annual variations overshadow the small, incremental changes in hydropower capacity and production attributable to relicensing and environmental quality gains.

Hydropower's role in California's energy resource mix is evolving. While hydropower will always have important attributes of low costs, no air emissions and peaking production flexibility, it is becoming a smaller part of the State's energy resource mix than it has been historically. The 14,116 megawatts (MW) of hydropower capacity represent 27% of California's current electricity production capacity. A finite water supply and lack of suitable dam sites that do not already have hydroelectric facilities severely limits the potential for expansion. In contrast, California has licensed 16 large (> 300 MW) natural gas-fired combustion turbine plants since 1996 totaling 10,403 MW capacity and $5.1 billion in investment. California has licensed an additional 814 MW of small natural gas-fired peaker plants on an expedited basis. Wind power is now the fastest growing renewables sector. In 2001, 736 MW of new wind power will receive funding support from California.

H. California's Recommendations For Improving The Relicensing Process.

- FERC staff Should Participate Early In The Relicensing Process.
- Require License Applicants To Provide Timely And Complete Studies And Information.
- Require FERC To Establish A Comprehensive Schedule For Relicensing.
- Require FERC To Establish Firm Schedules For Development Of Environmental Documents.
- Require Applicants In The Traditional Processes To Conduct Pre-Filing Consultation With The Public And Non-Governmental Organizations.
- Change The Timing Of The Filing Of Requests For Water Quality Certification Until After Completion Of The Joint Environmental Documents.
- Require Joint, Federal/State Environmental Documents.
- Abolish Or Strictly Limit And Condition The Issuance Of Annual Licenses.
- Reduce The Length Of License Terms And Require More Flexible Conditions, Including Adaptive Management and "Reopener" Provisions.
- Consolidate Licenses On A Watershed Basis.
- Promote And Facilitate Efforts To Develop Alternative Hydropower Technologies And Optimize Electricity Production From Existing Hydro Projects.
- Require FERC To Develop Better Data On Relicensing Time And Cost Relative To Environmental Impacts And Energy Benefits.
- Facilitate Continued Implementation Of Existing, Collaborative Efforts To Reform The Relicensing Process.
- Provide States Broader Authority To Apply And Coordinate Water Quality And Water Rights Procedures To FERC-Licensed Hydropower Projects.

I. INTRODUCTION

In this response, the California Resources Agency and the California Environmental Protection Agency (collectively, "California") provide their comments on, and response to, "Report On Hydroelectric Licensing Policies, Procedures, And Regulations – Comprehensive Review And Recommendations Pursuant To Section 603 Of The Energy Act Of 2000," prepared by Staff of the Federal Energy Regulatory Commission ("FERC"), May 2001 ("603 Report").

Congress directed FERC to prepare the 603 Report to determine how to reduce the time and cost of obtaining a hydropower project license. California supports the goal of streamlining the cumbersome FERC licensing process, and includes specific proposals in this letter. California opposes FERC staff's recommendations because they do not address the important causes of delay, would usurp California's (and other states') authority to administer the Clean Water Act, and would diminish environmental protection.

FERC has missed an important opportunity to work cooperatively with the states to develop relicensing reforms that meet state and federal objectives. FERC would have better served their charge from Congress by reaching out to California and other states in developing their analyses and recommendations.

The 603 Report recommends legislation that would eviscerate the states' authority under section 401 of the Clean Water Act. In taking this approach, FERC staff exhibits substantial disregard for, or misunderstanding of, the vital, congressionally delegated, role of states in requiring that hydropower projects comply with the Clean Water Act. The 603 Report recommendation would undermine the broad public interest in establishing conditions as part of the relicensing process to address degradation of the nations' rivers by hydropower projects licensed before Congress enacted modern environmental laws.

The 603 Report bases its recommendation on the claim that water quality certification is the most important factor in delays, but this claim is based on a logically flawed analysis. In California's experience, the longest delayed licensing proceedings do not involve water quality certification issues. It is also noteworthy that the 603 Report finds that the median time for relicensing is 43 months. Considering the complexity of the issues involved in relicensing, the environmental benefits of the bringing antiquated hydropower projects into conformity with current environmental laws, and the relatively small impact on electricity generation, a 43 month review period does not appear unreasonable.

In its effort to use relicensing delays as justification for eliminating state water quality certification authority, FERC staff ignores far more important sources of delay, including the Federal Power Act's provision for annual licenses subject to the same conditions as the original license. FERC's repeated issuance of annual licenses, sometimes for periods over 20 years after expiration of the original license, allows project operators to avoid environmental protection measures now required in modern licenses. Consequently, project operators have an incentive to delay the licensing process or fail to provide necessary relicensing information, and thereby to obtain pro-forma annual licenses without any environmental protection conditions.

FERC staff also ignores the potential for improving hydropower relicensing through changes in its own procedures. FERC's practice of requiring that applicants request water quality certification *before* filing an application for relicensing, in particular, has been a source of problems. As a result of that sequencing, the state must act on a request for certification *before* environmental documentation and other key studies required for FERC relicensing are prepared. This FERC procedure deprives the state of information necessary to determine conditions required for compliance with Clean Water Act standards, and therefore certification may be denied, or delayed pending completion of necessary studies. State water quality certification and FERC licensing should be coordinated to allow the state and FERC to review the project concurrently.

Instead of undertaking a comprehensive review of hydropower licensing to recommend ways to avoid unnecessary costs and delays, including a hard look at the effect of FERC's convoluted procedures, it appears that FERC staff have attempted to use the 603 Report as an opportunity to consolidate their authority at the expense of the states, and at the expense of water quality. The 603 Report is yet another instance of what the courts and Congress have identified as FERC's intransigence regarding the limitations on the scope of its authority and the importance of environmental protection.

II. BACKGROUND

A. California Is Working Aggressively and Creatively To Resolve Its Electricity Supply, Demand And Market Troubles

California has taken bold and creative actions to resolve the electricity supply shortages, demand levels and market dysfunction that have impacted the state since market deregulation in 1996. These actions are being implemented in three broad categories that correspond to the major points of California's energy plan to increase supply, reduce demand, and stabilize California's electricity market. They include:

1. Licensing more than 30 power plants with a combined capacity of over 11,000 MW representing more than $5.1 billion in investment;
2. Conducting environmental review on an additional 8,000 MW of new power generation;
3. Creating new, streamlined powerplant-licensing procedures;
4. Embarking on the most ambitious and successful residential, commercial and industrial energy efficiency investment program in California history. California has dispensed over $300 million for conservation measures over the past year that produced a monthly reduction of 5,570 MW peak use (14.1% reduction), and 2.7 million MWhr energy use (12.4% reduction) in June 2001;
5. Addressing natural gas supply shortages through market intervention and transmission capacity expansion;
6. Creating a new California Power Authority with a $5 billion investment fund and a legislative mandate to stabilize market conditions; and
7. Promoting renewable energy technologies to diversify California's electricity supply mix. California has awarded $200 million in renewable power purchase contracts that will spur development of more than 1,000 MW of renewable energy in the next five years.

Relicensing existing hydropower projects to improve environmental quality is distinct and nearly unrelated to California's aggressive, creative and successful efforts to alleviate the recent electricity supply shortages.

1. California Is Working To Increase Hydropower Capacity In An Environmentally Responsible Manner

California has been working to promote alternative hydro technologies that can expand the capacity of this electricity resource without damaging rivers and streams. Many dams and canals within California's extensive water supply system have the potential to support this new generation by using alternative hydro technologies. The California Resources Agency and Department of Water Resources are collaborating with a hydro engineering firm to identify sites within the State Water Project that are appropriate for a new generation of modular turbines that can be added to existing dams without affecting flows or fish passage. The California Energy Commission is providing funding support to a California firm that has developed a low head turbine technology that can be installed in existing canals and conduits and generate electricity from extremely low flows.

2. California Worked Cooperatively With FERC To Increase Hydropower Production In 2001

California worked cooperatively with FERC and California hydro producers in response to FERC's March, 2001 Order "Removing Obstacles to Increased Electric Generation and Natural Gas Supply in the Western U.S." (Order No. EL01-47-000). FERC proposed that California hydropower producers inventory their systems and identify projects where electricity production could be increased by changing environmental standards. FERC's goal was to increase the electricity supply and reduce the risk of blackouts.

California hydropower producers proposed several projects that potentially could have added a modest total of 550 megawatt-hours (MWhr) per day. Average daily demand in California in July is 700,069 MWhr. Staff from California's environmental regulatory agencies invested hundreds of hours of time to rapidly evaluate the proposals. Dry-year water conditions and the resulting stress on native fisheries limited the potential for changing standards without unreasonable adverse impacts, but California determined that two of the projects were appropriate to approve because they would create no additional stress on aquatic ecosystems.

B. California Is An Active Participant In the Licensing Of Hydropower Projects.

The California Resources Agency is responsible for the conservation, enhancement, and management of California's natural and cultural resources, including water, land, wildlife, energy, parks, minerals, and historic sites. It is comprised of several departments, commissions, and boards.[1] The California Resources Agency/Department of Fish and Game are state "trustee

[1] The constituent departments, commissions, and boards of the Resources Agency include the Department of Fish and Game, the Department of Water Resources, the Energy Commission, the Department of Parks and Recreation, the Native American Heritage Commission, the Department

agencies" for public trust resources including fish and wildlife.[2] Congress has designated the Department of Fish and Game as the state's public trust resources agency under the Fish and Wildlife Coordination Act.[3] Primarily through the Department of Fish and Game, the Resources Agency participates in the FERC hydropower relicensing consultation process pursuant to section 10(j) of the Federal Power Act.

The California Environmental Protection Agency's ("CalEPA") mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality. CalEPA is comprised of several boards, departments, and offices, including the State Water Resources Control Board ("SWRCB"). The SWRCB is responsible for administering the state's water right and water quality control programs.[4] The SWRCB is the state agency authorized to issue water quality certification as provided for under section 401 of the federal Clean Water Act.[5]

C. California Has Taken Action To Improve Hydropower Project Relicensing.

The State of California has demonstrated its commitment to licensing reforms by the following actions:

- The California Code of Regulations has been amended to provide an appeal process for Clean Water Act section 401 conditions that affords the licensee and the public the right to appeal conditions of a certification.

- The California Water Code was amended to include sections that expedite water rights processing for small hydroelectric projects under 5 MW.

- California continues to advocate for a coordinated environmental review process with FERC for the relicensing of projects under the traditional process. We support the development of a joint draft environmental document that the agencies can use to make their respective decisions earlier in the relicensing process.

- California has committed significant staff resources to participate throughout the traditional and the alternative licensing processes in California.

- California has participated in the various national review groups trying to find common ground on reforms to achieve environmental protection and increase efficiency in the relicensing of hydropower projects.

Forestry and Fire Protection, the Department of Boating and Waterways, the Board of Forestry, and the Department of Conservation.

[2] *See, e.g.*, Cal. Fish & Game Code §§ 711.7, 1802.
[3] See 16 U.S.C. § 661 et seq.
[4] Cal. Water Code §§ 174, 179, 1000-2900, 13000-14958.

[5] 33 U.S.C. § 1341; Cal. Water Code § 13160.

D. The Primary Purpose Of Relicensing Is To Apply Environmental Protection Requirements Enacted After Original Licensing.

The 603 Report has been prepared in the context of a major shift in FERC licensing. Where once the focus was on approval of new projects, FERC proceedings now address relicensing of projects initially approved 30 to 50 years ago – before the enactment of modern environmental statutes. Many of these large hydropower projects are due to be relicensed.

The Federal Power Act requires relicensing as means for reexamination of projects based on the laws and regulations currently in effect, and based on contemporary views of the public interest. In the period since the projects now up for relicensing were originally approved, there has been a substantial change in state and federal environmental policies, reflecting a significant shift in public attitudes about protection of the environment. Where once impacts on fish, wildlife, and other instream beneficial uses were given little weight, these matters now are a major concern.

This concern is reflected in federal environmental laws that will be applied to hydropower, often for the first time, in the context of relicensing. These include the National Environmental Policy Act ("NEPA"), the Endangered Species Act, and the Clean Water Act. In the Electric Consumer Protection Act of 1986, Congress revised the licensing process to require that fish, wildlife, recreation and other environmental values be given equal consideration to power and development values as part of the FERC licensing process.

In addition to setting new environmental protection requirements, these laws greatly expand the role of state and federal water quality and fish and wildlife agencies in hydropower relicensing. Their expanded role is appropriate in light of their expertise, and the added weight federal law now gives to environmental concerns. But FERC jealously guards its prerogatives, often adopting a narrow interpretation of the authority of other agencies in an effort to concentrate authority in itself, and to give less weight to environmental concerns. For example, the Energy Policy Act of 1992 vacated a FERC regulation that, in an attempt to avoid the authority of fish and wildlife agencies to prescribe measures for fish passage at hydropower facilities, narrowly interpreted the term "fishway" to provide for upstream but not downstream passage of resident fish.

A proper review of hydropower licensing policies, procedures and regulations must be made in the context of these considerations. It should take into account the importance of applying contemporary environmental statutes to hydropower projects, many of which were built without adequate attention to fish, wildlife, or other instream beneficial uses. It also must take into account the fact that, as expressly provided by Congress, a number of federal and state agencies, not just FERC, have important roles and responsibilities in hydropower licensing.

E. Hydropower Relicensing In California: The New Era of Environmental Protection.

For over 100 years, California has utilized hydropower. The watersheds of California's

mountainous eastern backbone, including the Sierra-Nevada Range, are laced with an elaborate network of dams, reservoirs, canals, penstocks, and powerhouses turning water into power. There are 119 FERC-licensed projects in California (not including hydropower projects that are exempt from FERC licensing requirements), affecting hundreds, if not thousands, of miles of rivers and creeks. Many of these licenses include multiple dams and affect whole river systems, such as the North Fork Feather River, Yuba River, American River, San Joaquin River, Kern River, Pit River and the Santa Ana River.

1. The Stakes Are High: Many Existing Hydropower Projects Must Comply With Modern Environmental Protection Requirements Through The Relicensing Process.

44 FERC licenses are due to expire in California over the next 15 years. Many of the hydropower generating assets of the large utilities in California, are or will be, subject to relicensing. Licenses issued by FERC have terms of 30 to 50 years. Some of the licenses that are due to expire, or have expired and are operating under annual licenses, were originally licensed in the 1940s and 1950s. Many hydropower projects are operating under licenses with little are no conditions for environmental protection because the licenses were issued before Congress enacted environmental protection legislation such as the Clean Water Act. Consequently, many hydropower projects in California will soon be required to comply with "modern" environmental standards for the first time through relicensing.

2. Hydropower Projects Cause Significant, Adverse Impacts To Rivers And Their Beneficial Uses.

Hydropower projects affect rivers in diverse ways. Many entire river systems are harnessed in a series of reservoirs/forebays, penstocks and diverted reaches. Hydropower projects modify river hydrology. Hydrology controls the physical, chemical and biological processes of the river. In California there are FERC-licensed projects that divert more than 90 percent of the rivers instream flow, particularly in the biologically important summer and fall months. There are existing FERC licenses with no instream flow requirements. The diverted reaches of these rivers are often dry. A review of Pacific Gas and Electric Company's extensive hydropower system, which has a 3,896 MW capacity, 26 projects and 99 reservoirs across 16 major California river systems, found that nine projects have instream flow problems and 10 have water quality problems.[6]

There is an overwhelming body of evidence in the scientific literature supporting the view that hydropower projects cause significant, adverse impacts to the physical, chemical and biological processes of rivers. The following is a brief list of the types of impacts that result from hydropower operations:

[6] California Public Utilities Commission, Draft Environmental Impact Report on Pacific Gas and Electric Company's Application for Authorization to Divest its Hydroelectric Generating Facilities and Assets, Application No. 99-09-053 (November 2000.)

- Changes in downstream chemical water quality (e.g., toxicants such as heavy metals, conventional pollutants and coliform concentrations); reduced stream flows also result in changes in downstream physical water quality (e.g., water temperature, nutrient load, turbidity, and dissolved gases).

- Alteration of downstream hydrology (e.g., changes in total flows and seasonal flows, reversed hydrology, loss of spring floods, and short-term fluctuations in river flows due to peaking (sometimes hourly), changes in extreme high and low flows, and stranding of fish).

- Alteration of downstream channel geomorphology (e.g., sinuosity, substrate composition, sediment load, armoring of the river bed, and loss of spawning gravels and substrates that support important food-web organisms).

- Loss of biological health (e.g., subsurface bio-geochemistry, habitat quality, and riparian zone characteristics).

- Reduction of biodiversity (e.g., habitat diversity, species richness, species abundance, species migration, and seasonal movement).

- Loss of river recreation opportunities (e.g., whitewater boating, fishing, swimming and other water contact recreation)

The adverse impacts of hydropower to California's natural systems are well documented. A recent California Energy Commission report finds that hydropower has a greater impact on California's natural resources than all other electricity generation sectors.[7] According to the Sierra Nevada Ecosystem Project report, aquatic and riparian systems are the most altered habitats in the Sierra Nevada, with dams cited as a major degradation factor.[8]

Two thirds of California's freshwater fish species have been impacted by hydropower development,[9] and 67 percent of California's native fish are considered to be extinct, endangered or in decline.[10] Dam construction has eliminated 95 percent of the original 6,000 linear miles of salmon and steelhead habitat in California's Central Valley.[11] Dams are the major factor in the

[7] California Energy Commission, Environmental Performance Report of California's Electric Generation Facilities: A Report to the State Legislature, Publication # 700-01-001 (available on-line) (July 2001).

[8] University of California, Davis, Center for Water and Wildland Resources, Status of the Sierra Nevada: Summary of the Sierra Nevada Ecosystem Project Report (1996)

[9] California Public Utilities Commission, Draft Environmental Impact Report on Pacific Gas and Electric Company's Application for Authorization to Divest its Hydroelectric Generating Facilities and Assets, Application No. 99-09-053, (November 2000).

[10] J.F. Mount, California Rivers and Streams (University of California Press 1995).

[11] U.S. Fish and Wildlife Service, Central Valley Project improvement Act Tributary Production Enhancement Report. Draft Report to Congress Pursuant to the Central Valley Project

loss of 89 percent of the state's riparian habitat.[12] These figures include both FERC-licensed and FERC-exempt hydropower projects.

Rivers and creeks affected by hydropower development are also an important source of recreation (fishing, boating, swimming, camping, etc.) for millions of Californians, and support many local (often rural) tourism-based economies as well as the state's commercial and sport fishing industries.

Hydropower enjoys a competitive advantage over other sources of energy because it has been granted free access to its fuel source -- the public's waterways. Due to the length of original hydropower licenses, licenses that straddle the environmental reform era, hydropower has been largely insulated from the responsibility of paying for the environmental cost that it imposes on society. No other major source of power - coal, nuclear, gas, or oil - has been so privileged. All have confronted their environmental obligations, and begun to internalize such costs.

III. FERC STAFF'S PROPOSALS UNDERMINE THE STATES' CLEAN WATER ACT AUTHORITIES.

A. State Administration Of Section 401 Of The Clean Water Act.

Section 401 of the Clean Water Act provides for state water quality certification of federal permits and licenses. An applicant for a federal permit or license that may result in a discharge to waters of the United States must obtain water quality certification from the state water pollution control agency. When the state issues water quality certification, it certifies compliance with specified provisions of the Clean Water Act, including the water quality standards requirements of section 303 of the Clean Water Act.[13] The certification includes implementation of any conditions necessary to meet these requirements or any other appropriate requirements of state law.[14] A federal agency cannot issue the permit or license unless the state issues or waives certification, and any conditions of the state's certification must be included as conditions of the federal permit or license.[15] Section 401 is consistent with the principles of cooperative federalism embodied in the Clean Water Act, under which state states have a primary role in establishing and implementing water quality requirements.[16]

Congress clearly intended section 401 to apply to FERC relicensing. Congress originally provided for state water quality certification as part of the Water Quality Improvement Act of 1970. In connection with the legislation continuing that authority as part of Section 401 of the

---

Improvement Act (1998).

[12] Warner and Hendrix (ed.), A Brief History of the Riparian Forest in the Central Valley of California, in California Riparian Systems, Ecology, Conservation and Productive Management. (University of California Press 1994).

[13] 33 U.S.C. § 1314.

[14] *Id.* § 1341(d).

[15] *Id.* § 1341 (a).

[16] See *id.* § 1251(b).

Clean Water Act, Congress stated:

> "[Section 401] continues the denial power which bars issuance of a license by such Federal agencies as the Atomic Energy Commission, *Federal Power Commission*, or the Corps of Engineers unless the State action was overturned in the appropriate courts of jurisdiction."[17]

The states' authority to require water quality certification for FERC licenses has been repeatedly upheld by the courts, including the United States Supreme Court in *PUD No. 1 v. Washington Department of Ecology* (1994) 511 U.S. 700. The United States Supreme Court rejected arguments that state water quality certification authority should be interpreted narrowly based on FERC's primacy over hydropower licensing. Specifically, the court rejected arguments that a state is limited to applying its numeric water quality criteria and cannot set instream flow requirements to protect the beneficial uses designated for protection under the state's water quality standards. 45 states joined in *amicus curiae* briefs supporting the position ultimately adopted by the Supreme Court and opposing efforts to limit state authority through a narrow interpretation of state water quality certification authority.

Because section 401 of the Clean Water Act is intended to allow the states to impose their own standards and exercise their own judgment as to what is necessary to comply with applicable requirements, federal authority to review certification decisions is limited. So long as the state acts within the time limits set by the Clean Water Act, the federal agency issuing the permit or license has no authority to review the basis for a state's decision to deny certification, or to modify or set aside conditions of certification.[18] Review is through state administrative procedures and in state court.

It appears that FERC staff's attempt to restrict state water quality certification authority is motivated not by concern over delays before certification is issued, but from the fact that states are making more frequent and effective use of their certification authority. While FERC views this trend with alarm, Congress should view the trend as positive. The states' use of their certification authority is fully consistent with the intent of Congress "to recognize, preserve, and protect the primary responsibilities of States to prevent, reduce and eliminate water pollution [and] to plan the development and use . . . of land and water resources."[19]

B. FERC Staff's Proposals Would Usurp States' Clean Water Act Authorities and Is Contrary To Longstanding Congressional Policy And United States Supreme Court Precedent.

FERC staff seeks federal legislation to restrict state water quality certification authority.

---

[17] S. Rep. No. 414, 92 Cong., 1st Sess. 69 (1971), *reprinted in* 2 Legislative History of the Federal Water Pollution Control Act Amendments of 1972, p. 1487 (1973)(emphasis added).

[18] *American Rivers Inc.* v. *FERC* (2d Cir. 1997) 129 F.3d 99.

[19] 33 U.S.C. § 1251(b).

In so doing, FERC staff are proposing an expansion of the power of a federal agency to impose its will at the expense of a state's well established authority over water quality.

The proposal is presented as a measure to address untimely issuance of water quality certification. But the recommendation does not address the procedural and technical problems that may delay issuance of certification. FERC's cumbersome procedures, which force applicants either to conduct duplicative studies or delay certification to allow the same studies to be used for certification and other licensing decisions, lack of monitoring data, and the incentive for applicants to delay because of the availability of annual licenses without any new conditions, all are ignored. Instead the report addresses only the substantive reach of state authority under section 401 of the Clean Water Act. This is an issue of profound importance to both FERC and the states, but is not likely to have a major impact on how quickly water quality certification is issued.

FERC staff recommend that Congress "clarify" that "water quality certification is limited to physical and chemical water quality parameters." FERC staff does not intend to clarify existing law. It seeks to amend the law to take away authority that the states clearly have under section 401 of the Clean Water Act. The paragraph discussing the proposal indicates that 401 certification would not include determination of the instream flows needed to implement state water quality standards, even though those instream flows would constitute a physical water quality parameter. In essence, FERC staff proposes that Congress overrule the Supreme Court's ruling in *PUD No. 1*.

After the Supreme Court's ruling in *PUD No. 1*, FERC sought to limit the types of conditions a state could impose as part of water quality certification. Adopting a narrow interpretation of "water quality," FERC took the position that conditions addressing water quality monitoring, schedules for compliance with water quality standards and water quality mitigation programs could not be addressed in water quality certification because they were not "water quality related." The courts rejected FERC's attempt to impose its erroneous interpretation of the scope of water quality certification authority on the states.[20]

In sum, FERC staff desires Congress to overrule the Supreme Court's decision in *PUD No. 1*, and apparently is seeking to have Congress to overrule the Second Circuit Court of Appeal's decision in *American Rivers, Inc. v. FERC* as well. In so doing, FERC staff are acting in disregard of Congress' longstanding policy of respect for state authority in matters relating to water quality control. Enactment of legislation along the lines proposed by FERC staff would not clarify the rules. Instead, the proposed legislation would create new uncertainty over the extent of FERC's authority to disregard state water quality requirements, resulting in more litigation to define the scope of the new rules. Far from streamlining hydropower licensing by proposing reforms that promote cooperation among state and federal officials with responsibility and expertise in the matter, FERC staff's proposals could open a turf war where hydropower licensing proceedings are held hostage to FERC's efforts to use delays in hydropower licensing as a pretext for expansion of FERC authority at the expense of the states.

C. FERC Staff's Suggested Separation Of Water Quality From Water Quantity Is Legally, Scientifically, And Institutionally Unsupportable.

[20] See *American Rivers Inc.* v. *FERC* (2d Cir. 1997) 129 F.3d 99.

FERC staff's proposal to limit state water quality certification to "chemical and physical water quality parameters" is an attempt to revive a long discredited argument that the Clean Water Act should address only water chemistry, to the exclusion of broader concerns of water quality including instream flows and protection of aquatic habitat. This argument is contrary to the express language of the Clean Water Act, which defines pollution to include alteration of the biological integrity of water.[21] The Clean Water Act recognizes that "changes in the movement, flow, or circulation of any navigable waters, including changes caused by the construction of dams, levees, channels, causeways, or flow diversion facilities" are sources of pollution.[22]

Responding to an earlier attempt by FERC to restrict state authority narrowly to water chemistry issues, and to deny states' broader authority over water quality, the United States Environmental Protection Agency ("U.S. EPA") observed:

> "[P]rotection of water quality involves far more than just addressing water chemistry. Rather, protection of water quality includes protection of the multiple elements which together make up aquatic systems including the aquatic life, wildlife, wetlands, and other aquatic habitat, vegetation, and hydrology required to maintain the aquatic system. Relevant water quality issues include the toxicity and bioaccumulation of pollutants, the diversity and composition of the aquatic species, entrapment of pollutants in sediment, stormwater and nonpoint source impacts, habitat loss, and hydrological changes."[23]

The states' increasing use of water quality certification to address the water quality impacts of FERC-licensed hydropower projects has been undertaken with the full support of the U.S. EPA:

> "EPA, as the principal agency responsible for administering the CWA [Clean Water Act], has taken steps to support States as they consider the full range of water quality impacts when evaluating Federal permits under Section 401 and licenses, including hydropower licenses. The types of potential adverse impacts associated with hydropower projects include loss or degradation of aquatic habitat; impacts on wildlife, fisheries, and endangered species that are dependent on the aquatic environment; accumulation of contaminated sediments; nonpoint source impacts; water chemistry problems such as low levels of dissolved oxygen; significant changes in temperature; and significant changes in flow volumes and timing."[24]

---

[21] 33 U.S.C. § 1362(19).

[22] 33 U.S.C. § 1314(f)(2)(F).

[23] Letter from LuJuana Wilcher, Assistant Administrator, United States Environmental Protection Agency to Hon. Lois Cashell, Secretary FERC (Jan. 18, 1991).

[24] Statement of Martha G. Prothro, Deputy Assistant Administrator for Water, EPA, before the Subcommittee on Environment, Energy and Natural Resources, of the House of Representatives (May 15, 1992).

FERC's suggested narrowing of state authority to the exclusion of flow and habitat protection is also misguided because changes involving broader concerns such as instream flows often correspond to changes in parameters measuring the chemical or physical characteristics of a water sample, such as temperature or turbidity. Changes in flows caused by hydropower and other water development projects may substantially change water temperature, turbidity, dissolved oxygen and algal productivity, as well as causing losses of assimilative capacity and saltwater intrusion.

California has long recognized the close relationship between water quantity and water quality. The legislation creating the SWRCB "was based upon the principle that water quality and water quantity regulatory activities should be jointly administered because they are interrelated and cannot be effectively administered independently."[25] A legislative committee report proposing the legislation states that: "It is becoming increasingly apparent that water quantity and water quality have a close relationship . . . ."[26]

More recently, the United States Supreme Court recognized that an attempt to define water quality so as to exclude water quantity issues such as instream flows amounted to "an artificial distinction."[27] The Court stated as follows:

> "In many cases, water quantity is closely related to water quality; a sufficient lowering of water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, or . . . as a fishery. In any event, there is recognition in the Clean Water Act that reduced stream flow, *i.e.* diminishment of water quantity, can constitute pollution. . . . This broad conception of pollution – one which expressly evinces Congress' concern with the physical and biological integrity of water – refutes [the] assertion that the Act draws a sharp distinction between the regulation of water "quantity" and water "quality."[28]

Even FERC's own regulations recognize that water quality and water quantity are intertwined.[29]

In sum, there is a close interrelationship between water quality and water quantity. Consequently, any attempt to define water quality narrowly, to the exclusion of water quantity, and to restrict state authority based on that distinction, is unworkable. Restricting state water quality authority based on that distinction would lead to the destruction of the aquatic resources water

---

[25] Recommended Changes in Water Quality Control, Final Report of the Study Panel to the California State Water Resources Control Board, Study Project, Water Quality Control Program (1969) at p. 3.

[26] Assembly Interim Committee on Water, A Proposed Water Resources Control Board for California (1966) at pp. 25, 29-30.

[27] *PUD No. 1* v. *Washington Department of Ecology* (1994) 511 U.S. 700, 719.

[28] *Ibid.*

[29] See 18 C.F.R. section 4.51(f)(2)(iii).

quality programs are intended to protect. FERC staff's proposal to revive the discredited view that states should be limited to concerns about water chemistry demonstrate FERC staff's lack of knowledge, or lack of concern about, water quality, and highlights the importance of preserving the states' water quality certification authority.

D. States' Administration Of The Clean Water Act Is Necessary To Implement Comprehensive Water Quality Control Planning.

Water quality control requirements need to be applied within a context of comprehensive planning, addressing all sources of pollution that may affect a body of water. This has long been the focus of California's water quality program, which provides for water quality control plans that include a program of implementation to address all sources of pollution, point and nonpoint source. The Clean Water Act also provides for water quality standards and implementation programs adopted and implemented by the states.[30]

In the initial years after the Clean Water Act was enacted, much of the focus was on chemical contamination. Chemical contamination, however, addresses just one element of the federal Clean Water Act's charge to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Today, California seeks to implement the Clean Water Act on a watershed basis. Under that approach, California considers other impairments to aquatic systems, including damage to aquatic life and habitat, loss of wetlands and stream corridor degradation.

In 1992, the National Academy of Sciences, Restoration of Aquatic Ecosystems, National Research Service stated:

> "Because aquatic ecosystems are interconnected and interactive, effective restoration efforts should usually be conducted on a large enough scale to include all significant components of the watershed."

Similarly, the National Governors Association Water Resources Management Policy Statement in February 1993 endorses the need for comprehensive planning and implementation, incorporating both source control and water quantity issues:

> "A systems management approach would involve the development and operation of a comprehensive water resource management program -- though ultimately it need not be limited to water resources within the specific geographic area encompassing the basin or watershed. Components of such a comprehensive program would include water supply, water quality, water conservation, flood protection, land use, and protection of fish and wildlife resources."

A comprehensive approach to sustainable water resource management is needed to address

[30] 33 U.S.C. § 1313.

the myriad water quality problems that exist today from nonpoint and point sources as well as from habitat degradation. Watershed planning is a management approach for more effectively protecting water quality and restoring aquatic ecosystems and protecting human health. Currently, state and federal resource managing agencies are developing watershed scale assessments.

States are clearly in a much better position than FERC to address the impacts of hydropower projects within a context of comprehensive planning. The states, not FERC, have authority to regulate other sources of pollution that contribute, cumulatively, along with hydropower projects, to the degradation of the nations' waters. Only states, not FERC, engage in comprehensive planning, including adoption of water quality and implementation plans, and periodic updates to those plans based on the states' experience in implementation.

FERC is not a planning agency. However, the 603 Report seeks to limit the existing authorities of resource planning/managing agencies, both state and federal, and to vest that authority in FERC under the theme of "One Stop Shopping." FERC is misguided in its premise that if agency mandatory conditioning requirements are eliminated or reduced to simple recommendations, the need to comply with these various federal laws by licensees are somehow avoided, or can be balanced by FERC. That is not the case. The balancing has already been done by Congress. In administering the Clean Water Act, Congress and the U.S. EPA have determined that the most efficient regulatory agents for water quality and quantity are the states. The states promulgate specific river basin plans and identify the beneficial uses and the standards to protect those identified beneficial uses through a regional public process that includes periodic review. The states then implement, and ensure compliance with, the basin plans.

FERC is ill prepared to undertake the legal authorities and mandates vested in other state and federal agencies that make up the diverse and necessary framework for resource allocation with its checks and balances. State leadership in implementation of the Clean Water Act is also necessary to assure that local goals are met at the same time that water quality is protected. States consider land use, economic development, and other locally-adopted policies in their decisions.

The hydropower industry's contention that it is unfairly subjected to dual federal-state regulation is also inherently invalid. Under our federal system of government, many proposed projects affecting public resources, including mining and other activities (even on federal lands), must comply with both state and federal law as a precondition for operation. Even the FERC-exempt, federally operated, hydropower projects within the Central Valley Project in California must comply with water rights and water quality control requirements imposed by the SWRCB. Exemption of "privately" operated hydropower facilities from compliance with state laws would be to the detriment of all other water users who would be required to pay for the water quality mitigation that should rightfully have been provided by the hydropower facility.

IV. FERC'S OWN PROCEDURES AND PRACTICES, NOT STATES' ADMINISTRATION OF THE CLEAN WATER ACT, ARE THE PRIMARY CAUSE OF RELICENSING DELAYS IN CALIFORNIA.

FERC's arguments that state water quality certifications are the greatest cause for

relicensing delays are not supportable. The following are some examples of ongoing relicensings that have yet to be completed by FERC, and which are not awaiting state 401 certifications from California:

- Mokelumne River Project (FERC #137) license expired 1975
- Rock Creek-Cresta Projects (FERC #1962) license expired 1982
- Crane Valley (FERC #1354) license expired 1989
- Lytle Creek (FERC #1932) licensed expired 1996
- Mill Creek (FERC #1934) licensed expired 1996

A. FERC's Perpetual Issuance Of Annual Licenses Is A Major Cause Of Relicensing Delays.

Each of the projects listed above is operating on an annual license. They are operating under the same terms of the expired license. In the case of the Mokelumne Project, it received its last license in 1925. The Mokelumne Project continues to operate under the terms of the 1925 license that expired in 1975. The Mokelumne Project has essentially been afforded a 76 year license, without consideration of environmental protection legislation enacted over the past 30 years. FERC took over 10 years to complete relicensing of the Kings River Project (FERC #1988). These delays in relicensing were not caused by pending state water quality certification. They are a product of FERC's issuance of annual licenses.

FERC and the hydropower industry assert that delays in the process cost the licensee money. On the contrary, delays in the process save the project owners money in the short-run by allowing the postponement of expenditures for mitigation of environmental impacts. Delays in relicensing do not lessen power production, because power production continues under the terms of the prior license until a new license is issued, no matter how long the licensing process takes. The ability to be granted an annual license in many cases acts as a disincentive to complete the required studies and to move timely through the licensing process. Consequently, delays in licensing postpone mitigation of the environmental harm caused by the hydropower facilities and perpetuate the ongoing damage caused by their continued operation.

B. Baseline Water Quality And Resource Management Data For Many Existing Projects Subject To Relicensing Is Not Available.

The above, antiquated licenses, as well as many others in California, do not contain license articles that require the licensee to monitor the effects of project operations. Many licenses are silent on the systematic collection of hydrology data, fish population data, recreation use and values, and water quality data. Given the paucity of existing data, and the evolution of our understanding of riverine ecosystem functions, state and federal agencies must require the appropriate studies prior to the issuance of a new license.

C. FERC Fails To Impose Firm Deadlines For The Completion Of Scientific Studies Necessary For Sound Water Quality And Other Resource Management Determinations.

The regulations implementing the FPA provide a number of deadlines for participants in the licensing process. Conversely, these same regulations include no deadlines for FERC in the licensing process. The licensing process, by its nature, is complex. Mandatory conditioning agencies are particularly disadvantaged by the long lapse of time between an applicant's filing of a new application and FERC's issuance of the Ready for Environmental Analysis notice. During that time, FERC may submit Additional Information Requests (AIRs) to the applicant. Unfortunately, the license applicant often delays in responding, or refuses to respond in a timely fashion to the FERC AIRs. In addition, FERC often delays requiring, or refuses to require, the applicant to complete the agency requested studies that were required as part of the first and

second stage consultation requirements prior to submitting the license application to FERC.

FERC's handling of El Dorado Project #184 is an example of this problem. The license application was submitted without completion of the water quality, fisheries, hydrology, recreation, or aquatic surveys for listed or sensitive species. The state and federal agencies commenting on the draft application concluded that the application was deficient. FERC nevertheless accepted the application for filing, thus triggering the requirement for water quality certification. Because the data will not be available for more than a year, the SWRCB is forced to either deny certification or waive its authority for certification. The other option is for the applicant to withdraw its request.

This recurring problem is a product of FERC's own regulations. The failure to complete required studies, the absence of firm deadlines governing responses to AIRs, and the premature requirement to request 401 certification, leaves the agencies uncertain about when or if they will receive necessary information. This uncertainty compromises the agency's ability to evaluate and analyze project impacts to natural resources. FERC makes no commitment to provide schedules for completion of its Draft or Final NEPA documents. FERC conducts these analyses without the provision of, or commitment to, any deadlines. FERC is also resistant to preparation of state/federal joint environmental documents as required by the President's Council on Environmental Quality ("CEQ") NEPA guidelines.[31]

FERC should hold itself accountable for these problems. A greater source of licensing delay and increased costs for both the applicant and the participating agencies can be attributed to the lack of a firm requirement to complete the required resource studies on time, the current requirement for the premature filing of the 401 request, and lack of a required schedule for the development of the Draft and Final NEPA documents. While licensees and agencies are required to consult and spend staff resources in stage one and two of the licensing process, FERC is not required to commit any staff resources and has exhibited a reluctance to participate in the early stages of the licensing process.

V. THE 603 REPORT IS PROCEDURALLY AND TECHNICALLY FLAWED.

A. The 603 Report Is Only A "Staff" Report That Does Not Reflect The Broad Public Interest In Relicensing.

Section 603 of the Energy Act of 2000 requires the Federal Energy Regulatory Commission to report to Congress. However, the section 603 Report submitted in May 2001 is a FERC "staff" report, and not approved by the Commission. Is the 603 Report controversial within the Commission? We suggest that because the 603 Report is merely a staff report, its conclusions and recommendations are open to question and policy review. It is also disconcerting, that despite numerous requests, FERC staff failed to circulate its 603 Report in draft for further, more specific comments by interested parties before submitting it as a "final" document. FERC has missed an important opportunity to work cooperatively with the states to develop relicensing reforms that

[31] 40 C.F.R., section 1506.2.

meet state and federal objectives. FERC would have better served their charge from Congress by reaching out to California and other states in developing their analyses and recommendations.

California is similarly concerned about FERC's lack of circumspection in responding to comments. FERC staff summarily rejects nearly all of the comments and recommendations provided by other federal and state agencies, and by public interest groups, and uniformly endorses industry comments and recommendations. This approach does not adequately reflect the broad public interest in the relicensing of hydropower projects and closely parallels the Bush Administration's narrow search for input in its development of proposed energy policy.

B. The 603 Report Lacks A Clear Problem Statement And Supporting Data To Justify Its Conclusions.

The FERC 603 Report lacks a clear problem statement. The general theme is that relicensing has become too slow, and that this unduly burdens hydro producers seeking to relicense hydropower projects. The 603 Report does not present a convincing argument that the median 43 month time period correlates with unreasonable costs, losses in energy capacity, or losses in energy production. Two independent reports from the General Accounting Office[32] and Department of Interior[33] confirm that the 603 Report's conclusion that relicensing is too slow is not based on sound evidence.

The 603 Report is completely silent on the environmental quality benefits that are created when hydropower projects licensed prior to the passage of major environmental statutes are brought into conformance with those laws. These environmental quality gains are substantive and measurable. In California, 60% of the entire 14,116 MW hydropower system was built and licensed prior to the 1970's when the modern environmental statutes were passed. Three and a half years may not be an unreasonable amount of time to determine license conditions necessary for environmental protection.

The 603 Report's treatment of costs associated with relicensing is at best incomplete and misleading due to its reliance on self-selected and self-reported data from licensees. The 603 Report also ignores the tremendous increase in the market value of hydropower due to the new energy markets. The high revenue streams increase licensees' ability to pay for modern, relicense conditions, necessary for compliance with environmental protection requirements.

C. The 603 Report's Analytical Methods Are Flawed.

The method used by FERC staff to analyze license processing times was to:

- compile a data set of license applications filed between 1993 and 2000;

[32] U.S. General Accounting Office, Licensing Hydropower Projects: Better Time and Cost Data Needed to Reach Informed Decisions About Process Reform, GAO Report No. GAO-01-499 (May 2001).

[33] United States Department of the Interior, Letter to Federal Energy Regulatory Commission Secretary David Boergers (January 30, 2001).

- compute the average and median processing times;
- compare it to a data set compiled and analyzed by the General Accounting Office for the period of 1982 to 1992;
- find a significant increase in processing time; and
- conclude that mandatory conditioning authorities, especially 401 of the Clean Water Act, were the causal factor in the significant increase in processing time.

FERC's methodology for this analysis does not follow accepted methods for data collection, study design, statistical or regression analysis. Thorough critiques of FERC's method are provided in the referenced reports from the General Accounting Office ("GAO") and Department of Interior. The grossest errors occur in the way all license applications are compiled into a single data set. The data is not broken into categories for large and small projects, new or existing projects, and whether significant endangered species, water quality or other significant environmental quality issues are present that must be analyzed. There is also no distinction between "process" issues and substantive environmental quality issues.

It is statistically invalid to attempt to correlate mandatory conditioning authorities with increases in relicensing processing time without carefully disaggregating the data. The GAO recommends that FERC carefully collect and categorize data so that time, cost, geographic, project type, issue and process factors can be clearly identified and understood.

Using its own analysis, the Department of Interior found that, "There is no significant difference between the time for processing license applications for which mandatory conditioning authority was exercised and those applications for which it was not."[34] Interior staff recommend using a statistical analysis method that was developed specifically to analyze time sequences.

D. The 603 Report Trivializes The Role Of Science In Relicensing.

One of the delay factors cited in the 603 Report is "requests by resource agencies or intervenors for additional applicant-funded environmental studies."[35] This is not a trivial issue. In California's experience, applicants often do not conduct studies of sufficient scope, duration or methodological rigor to create the scientific baseline information required to make informed, science-based decisions that withstand 30 to 50-year time horizons. Due to California's varying weather cycles, multi-year studies are especially important in order to capture the appropriate range of normal, wet and dry year conditions.

This dearth of scientific information on hydropower impacts to environmental quality in California is documented in the California Public Utilities Commission extensive environmental review of Pacific Gas and Electric Company's hydropower system. PG&E's systems includes 26 projects, 68 powerhouses with 3,896 MW capacity, 99 reservoirs, 250 dams and diversions, and

[34] *Ibid.*

[35] 603 Report at p. 30.

encompasses 15 major river systems and watersheds in Northern and Central California.[36] Unless a project has been recently relicensed, current, scientifically valid, baseline data is generally not available.

This lack of scientific data is also recognized by California's Public Interest Energy Research[37] (PIER) program, which is administered by the California Energy Commission. PIER has formulated a research module to compile and collect system-wide scientific information on the environmental quality of rivers and streams affected by hydroelectric production.

E. The 603 Report Lacks Objective Cost Data.

The cost data and analysis presented in the 603 Report have little objective value. As stated in the report, FERC does not require applicants to submit cost information. The data set is therefore self-selected and self-reporting, and cannot be used in a statistically valid manner to make conclusions or recommendations. The costs are not sorted and correlated with project size, location, endangered species or water quality issues. The GAO report also critiques FERC's methodology for analyzing relicensing costs.

Moreover, the cost analysis is presented without any reference to the increasing market value of hydropower in California and the western United States. Relicensing costs may or may not be appropriate or reasonable, depending on a stakeholder's perspective. However, the increasing market value of hydropower makes project level relicensing costs proportionally smaller. Recent news accounts of public utility power sales to the California Department of Water Resources on behalf of California investor owned utilities found that the average sale price for the first quarter of 2001 was $246/MWh. Of 22 public utilities reviewed, 16 are primarily hydropower producers.[38]

Two other important facts about hydropower production are that: (1) producers have been recovering capital investments over long time periods (recall that 60% of California's 14,116 MW of capacity was built prior to 1970, and no new major plants have been built for about 10 years); and (2) operation and maintenance costs, including relicensing costs, are part of the public utility rate base and are readily recoverable from large customer pools with no risk to investors.

F. The 603 Report Fails To Recognize The Success Of Ongoing Efforts To Improve The Relicensing Process.

Curiously, the 603 Report does not recognize the value of FERC's recent efforts to make

---

[36] California Public Utilities Commission, Draft Environmental Impact Report on Pacific Gas and Electric Company's Application for Authorization to Divest its Hydroelectric Generating Facilities and Assets, Application No. 99-09-053 (November 2000).

[37] California Energy Commission, California Public Interest Energy Research Program, 2001 Environmental Area Research Plan (In Preparation).

[38] *Municipal Power Firms Cleaned Up* (July 16, 2001) The San Francisco Chronicle, at p. 1.

relicensing more administratively efficient. FERC's preliminary analysis shows that the Alternative Licensing Process (ALP) program, which began in 1995, has the potential to significantly reduce relicensing time without sacrificing scientific rigor, due process, or environmental quality. FERC's preliminary analysis of 19 relicensing applications filed since 1995 finds a median processing time of 16 months.[39] Recognizing the analytic deficiencies of the 603 Report, this figure is much lower than the median 43-month figure cited for standard relicensing.

VI. HYDROPWER IS AN IMPORTANT PART OF CALIFORNIA'S ELECTRICTY SUPPLY SYSTEM THAT IS NOT SIGNIFICANTLY AFFECTED BY RELICENSING.

Hydropower plays an important role in California's electricity supply mix by providing power that is low cost and emissions free. Hydropower's most important attribute in California is its flexibility in meeting peak demands during summer high load periods. While energy is on the minds of all Californians today, our current energy supply problems were not caused by the FERC hydropower relicensing process, nor by California's exercise of its authority to condition licenses for the protection of beneficial uses of its rivers. In fact, there is almost no correlation between relicensing and changes in hydropower production levels.

FERC's 603 Report documents that changes in electricity capacity and production associated with project relicensing are negligible. FERC Staff reviewed 246 relicensings between 1986 and 2001, and found that:

> "[T]he average annual generation loss, attributed largely to increased flows to protect aquatic resources, was 1.58%, while the average installed capacity increased 4.06%.[40]

[39] 603 Report at p. 33.

[40] 603 Report at p. 50.

These same findings apply to California's experience with project relicensing between 1986 and 2001, as illustrated by the following examples.

Rock Creek-Cresta – FERC 1962

Rock Creek-Cresta is a large 185 MW project on the Feather River in Plumas County that has operated on an annual license extension for 18 years. The long-term average flow for this reach is about 2,400 cfs. Minimum instream summer flows are 100 cfs. As a result of relicensing, minimum instream flows will increase 80% from 100 cfs to 180 cfs. A small capacity change not associated with relicensing will increase average annual electricity production 4.4%.

The environmental quality gains from a proposed relicensing Settlement Agreement would be important. In addition to more complex instream flow requirements over a range of water year conditions, the project must meet a 20E C cold water standard, which will help sustain and restore a native trout population. Other important environmental quality gains include monitoring plans for temperature, fisheries and riparian vegetation, a $7 million fund for temperature and fisheries enhancement, and a variety of sediment management and transport measures.

Mokelumne River – FERC 137

The Mokelumne River is a major drainage of the central Sierra Nevada and a large hydropower producer for PG&E at 215 MW. The Mokelumne River Project has operated on an annual license extension since 1975. The original 1925 license allowed for diversion of up to 95% of the river's flow. Under the 2000 Settlement Agreement, there will be no capacity change. Instream flows will increase throughout the project. For example, the minimum summer instream flow at Salt Springs Reservoir will increase from 10 cfs to 30 cfs. Production changes from increases in instream flows are not readily available.

As with Rock Creek-Cresta, important environmental quality benefits will occur from the relicensing provisions, which include the cold water standard, an ecological resources monitoring program and adaptive management plan, and minimum reservoir pool levels.

In summary, due to the scale of California's electricity production system and the unique attributes of California's weather cycles and hydropower infrastructure, diminishments in hydropower production due to project relicensing are anticipated to have non-consequential effects on system reliability and California's ability to meet load demand in the coming years. It should be noted that delays in relicensing, such as the examples just cited, do not affect power production. This is because current FERC policy allows licensees to operate projects under the original license conditions and operating parameters until a new license is issued.

A. California Hydropower Capacity

California's hydropower production system comprises a diverse mix of producers, infrastructure, dispatch policy and geography. Nearly all of California's major river systems have some type of hydropower facility. California has 386 hydro generating stations 0.1 MW and larger for a total of 14,116 MW of installed hydropower capacity.[41] This represents about 27% of the state's total 53,000 MW capacity. Capacity by producer is illustrated in the following chart.

Producer	MW Capacity	% Total
Investor Owned Utilities	5,122	36%
State / Federal Water Projects	3,876	27%
Municipal Utility Districts	3,351	24%
Irrigation Districts	704	5%
Other	142	1%
Total	**14,116**	**100%**

Source: California Energy Commission – Power Plants in California

FERC licenses 119 projects in California for a total of 9,956 MW (FERC projects often have multiple generating stations). About 3,876 MW of California's hydropower capacity are part of the state and federal Water Projects, which produce hydropower ancillary to water supply and conveyance, and are net purchasers of energy. More than 8,000 MW, or about 60% of the current system, was built between 1920 and the early 1970's, before modern federal and state environmental laws were enacted. The last major expansion of California hydropower production occurred in the 1970's and 1980's, when about 4,800 MW of capacity was added.

California's hydropower infrastructure was built to capture the seasonal runoff from mountain snowpacks. It is characterized by relatively low MW capacity powerhouses that use river water diverted to penstocks that produce electricity under extremely high head (pressure) in the turbines. California's system has very few large, low head, run of the river projects that typify hydropower in the Pacific Northwest and in the Northeast.

A relatively small number of hydropower stations represent the majority of in-state hydro capacity. Of the 386 hydropower stations or powerhouses 0.1 MW or larger, only 44 have 100 MW capacity or greater, while another 24 units range from 50 MW to 99 MW. These 66 units (17% of the total) provide 85% of all hydro capacity.

[41] California Energy Commission, 2001 Database of Power Plants in California. Note that a hydro generating unit does not correspond to a FERC-licensed hydro project. FERC projects often contain multiple powerhouses.

B. California Hydropower Production

Hydropower production in California varies widely depending on weather cycles and hydrologic conditions. Depending on the weather cycle, hydropower can account for 10% to 25% of California's in-state sales. Between 1990 and 2000, average annual hydropower production accounted for 17% of total electricity sales (37,022 GWh). In the critical dry water year of 1992, in-state hydropower accounted for 10.75% of electricity sales (22,373 GWh). In the above normal water year of 1995, in-state hydropower accounted for nearly 25% of total sales (51,665 GWh)[42] In a three-year period, there was a 130 percent difference in hydropower production. This variance in California hydropower production is significantly different from production in the Northwest and Northeast.

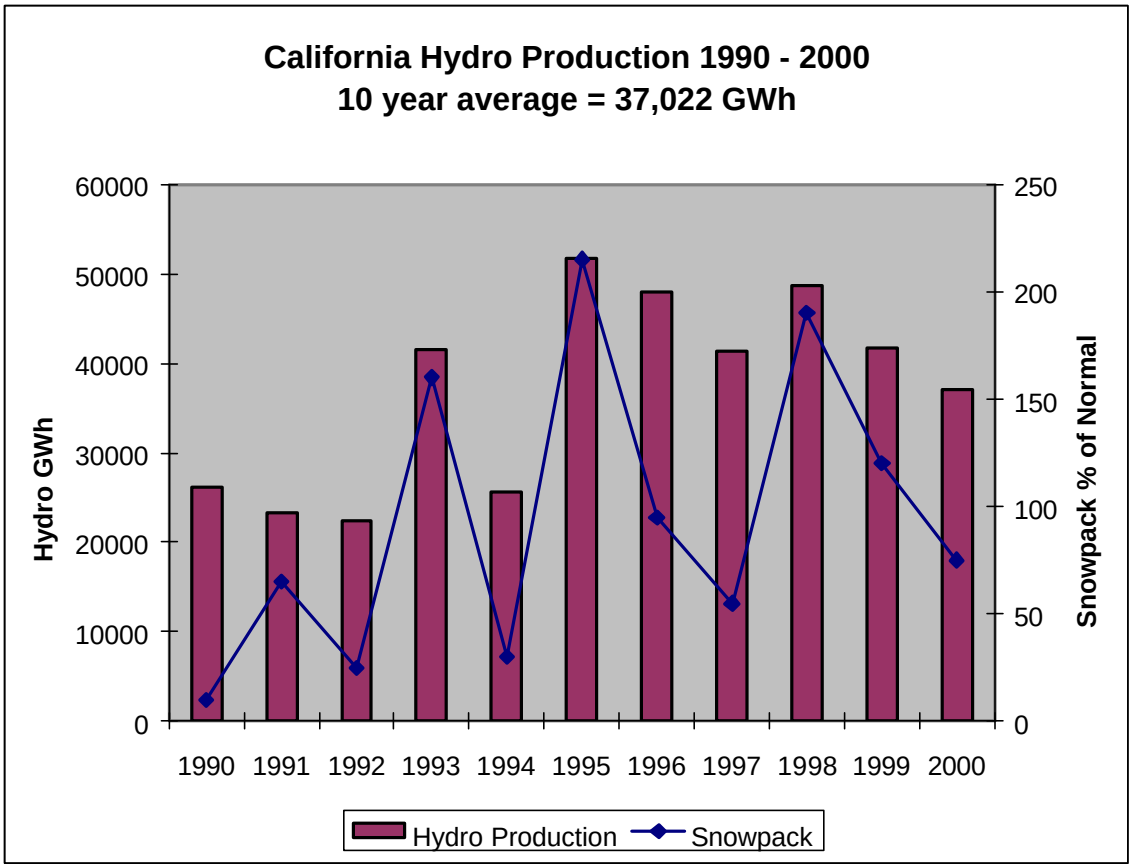
This wide variance in hydropower production is an important element of reliability planning and forecasting in California. Prior to market deregulation in 1996, energy planners would de-rate California hydropower production to a dry year scenario for reliability planning purposes. Run of river and baseload production vary too widely to be relied upon in any given year to meet load demand. When available in wet and normal water years, run of river and baseload hydropower supplies mean that production from natural gas-fired plants can be scaled back. When baseload, run of river and peaking reserve supplies are lower due to dry and critical dry water conditions, California has always had to procure alternative electricity sources. Substitutes for these types of electricity have been readily available from Northwest hydropower producers and from dispatching less efficient natural gas fired units within California. The 2001 drought in the Pacific Northwest and market dysfunction in California have altered the reliability of this standard energy reserve mix.

Energy planners emphasize peaking reserve capacity as the key hydro attribute for reliability planning. It is the peaking attribute of summer hydro production that is most important in meeting peak demand on hot summer afternoons. The peaking reserve capacity is a function of summer reservoir storage levels and snowmelt run-off. Although 2001 is a designated "dry year" by the California Department of Water Resources with a total water year forecast of 55% of normal,[43] reservoir storage levels are at average, and peaking reserve capacity is also at about average.

[42] California Energy Commission: California Electricity Production 1990 to 1999, Total Production by Resource Type, and 1999 Net System Power Report.

[43] California Department of Water Resources, Water Conditions in California, Bulletin 120 (June 2001).

The following chart shows the relation between hydropower production and snowpack levels from 1990 to 2000.



The vast scale of these year to year variations in California hydropower production overshadow the energy significance of small, incremental changes in hydroelectric capacity and production from relicensing and environmental quality gains. This is especially true for the peaking reserve capacity component of California hydropower. The extremely large load demands in California of 600,000 to 700,000 MWhr per day, and the wide variety of in-state and out-of-state energy resources available to meet this demand, render incremental changes from hydropower relicensing immeasurable, and statistically insignificant

C. Relation of California Hydropower to Other Energy Production Sectors

As shown on the table, hydropower represents 27% of California's current electricity production capacity.

Fuel Type	MW Capacity	% of Total
Natural Gas	27,773	53%
Hydro	14,111	27%
Renewables	5,874	11%
Nuclear	4,310	8%

Investment in hydropower resources in California has been stagnant for about a decade for a

variety of reasons. A finite water supply and lack of suitable dam sites that do not already have hydropower facilities severely limit the potential for expansion. The large, investor owned utilities stopped investing in hydropower upgrades in the early 1990's in anticipation of deregulation. Finally, changes in economic incentives such as avoided cost contracts and tax credits changed the economics of small hydro project viability. In contrast, California has licensed 16 large (> 300 MW) natural gas fired combustion turbine plants since 1996 totaling 10,403 MW capacity and $5.1 billion in investment. Under expedited permitting, 11 more small natural gas-fired plants totaling 814 MW of capacity have also been licensed. Some of these small plants have the same peaking production flexibility as hydropower; they can quickly ramp up and down to meet peak load demand.

For renewable energy resources, the California Energy Commission Renewable Energy Program will provide incentive funding for about 1,000 MW of new renewable capacity by 2002. Wind power comprises 73% of this new capacity (736 MW), while small hydro comprises 1.3% (13.2 MW). Wind power is the fastest growing renewables sector in California.

Hydropower's role in California's energy resource mix is evolving. While it will always have important attributes such as low costs, no air emissions and peaking production flexibility, it is becoming a smaller and less unique part of the State's energy resource mix than it has been historically. Combined cycle combustion turbine gas plants are not subject to seasonal weather variance, provide reliable baseload electricity, and can be sited near load centers. Natural gas-fired peaker plants have the exact peaking flexibility that has been the unique characteristic of hydropower. Wind power is becoming increasingly cost competitive and is also an emissions free energy resource. Photovoltaics, fuel cells and distributed generation continue to evolve towards large-scale commercial viability.

VII. CALIFORNIA'S RECOMMENDATIONS FOR IMPROVING THE RELICENSING PROCESS.

California recommends the following changes in the Federal Power Act and FERC regulations or practice to enhance or increase the efficacy of the licensing process:

A. FERC Staff Should Participate Early In The Licensing Process.

The current FERC regulations for the stage one consultation process require an early commitment of staff resources by other state and federal agencies, but not by FERC. Where the traditional licensing process is followed, FERC staff should participate in the consultation stages. Where the Alternative Licensing Process (ALP) is followed, FERC staff should also be involved early in the process. This effort will help save time in the overall licensing process

B. Require FERC To Establish A Comprehensive Schedule For Relicensing.

A comprehensive licensing schedule, prepared after consultation with all the stakeholders, would guide the parties in allocating their resources. Public agencies, in particular, would benefit from the ability to budget the necessary resources in advance. The schedule would provide FERC

with a tool for managing the various steps in the licensing process and for seeking to bring the proceedings to a timely conclusion.

C. Require FERC To Establish Firm Schedules For Development Of Environmental Documents.

The time between having a license application accepted for environmental analysis and the development of the environmental analysis is not predetermined by FERC. In some instances it can be over a year before the environmental document is prepared for public review. Many agencies rely on information and analyses in the environmental document as part of their decision record. Without firm schedules, agencies have no way of knowing when the information necessary for their actions will be available.

D. Require Applicants In The Traditional Processes To Conduct Pre-Filing Consultation With The Public And Non-Governmental Organizations.

The ALP involves early consultation with the public. The traditional process does not. While FERC encourages the ALP, license applicants are free to use the traditional process. In California, only a few ALP's are currently ongoing, while several other license applicants are considering the ALP. Most relicensing to date in California is by the traditional process. If the traditional relicensing process had the requirement for early public consultation, applicants would see reductions in the overall costs and time in acquiring a new license.

E. Require Applicants To Provide Timely And Complete Studies As Requested By Agencies.

The FERC regulations require license applicants to complete all reasonable and necessary studies and to obtain all reasonable and necessary information requested by the resource agencies and Indian Tribes.[44] The studies and their results are supposed to be completed prior to filing the license application.[45] In California's experience, applicants often fail to complete the required studies prior to the required submittal of the FERC application. In many instances FERC has accepted the license application for filing without setting firm deadlines for the licensee to complete the ongoing studies or studies yet to be initiated, leaving the resource agencies without guarantees that the studies required pursuant to the regulations will be forthcoming. This is a huge problem that results in nearly all of the delays in issuing a new FERC license. Even if a collaborative process is formed to expedite the development of license conditions, that process is generally delayed due to the licensee's recalcitrance in completing baseline studies on time.

F. Change The Timing Of The Filing Of Requests For Water Quality Certification Until After Completion Of The Joint Environmental Analysis.

[44] 18 C.F.R., section 16.8(b)(4)(i)-(vi).

[45] 18 C.F.R., section 16.8(c)(i)).

When a licensee files a license application with incomplete studies, FERC treats the results of these studies as "additional information". However, the additional information may include studies addressing water quality, hydrology, fisheries, and threatened or endangered species. Regardless of whether the licensee's application contains these studies, FERC requires the applicant to file for water quality certification with the state. California's experience that some of the studies will not be completed within the one year that the state has to act on the request. In many cases these studies address issues that are relevant to the water quality certification. The state is forced to deny the request without prejudice subject to completion of the appropriate studies. This action is a result of the premature filing of the request for water quality certification pursuant to FERC regulations.[46]

G. Require Joint, Federal/State Environmental Documents.

The CEQ regulations implementing NEPA require that all agencies, including FERC, shall cooperate with the State and local agencies to the fullest extent possible to reduce duplication between NEPA and state and local requirements.[47] Such cooperation shall, to the fullest extent possible, include joint planning processes, joint environmental research and studies, joint public hearings (except where otherwise provided by statute), and joint environmental assessments.[48]

While California advocates the preparation of joint environmental documents, FERC staff have repeatedly refused to do so. FERC's uncooperative attitude results in duplicative environmental documents, to satisfy the similar requirements of state and federal environmental review, to impose increased costs and delays on all parties.

H. Abolish Or Strictly Limit And Condition The Issuance Of Annual Licenses.

As discussed above, the availability of annual licenses creates a perverse incentive. License applicants who delay relicensing by submitting incomplete applications or refusing to conduct necessary studies are rewarded by the issuance of annual licenses, for as long as the dispute over the adequacy of the application or supporting studies continues. There is no real deadline for completing the relicensing process in a timely manner. Through annual licenses, the project continues operation under the terms of the original license, without any change to reflect current information or current law, making Congress' 50 year limitation on hydropower licenses meaningless.

Congress should eliminate annual licensing and create a firm deadline for the completion of relicensing. This change would have to be phased in, as relicensing applicants and FERC have been proceeding in reliance on the fact that there is no true deadline. After an initial transition period applicants should be required to plan ahead to complete relicensing on time. Licensees

[46] 18 C.F.R., section 16.8(f)(7)(i)-(ii).

[47] 40 C.F.R., section 1506.2.

[48] *Id.*

have 30 to 50 years to prepare for this deadline, and 5 years in which to initiate and complete the process. That should be more than enough time. A firm deadline would not only eliminate licensees' current incentive to delay relicensing, but should create a positive incentive for more effective participation in the relicensing process.

In the alternative, Congress should mandate that FERC strictly limit and condition its issuance of annual licenses. Congress should amend the Federal Power Act to limit the number of years a project may operate under annual licenses, confirm that operations under annual licenses must comply with any interim conditions that may be set by agencies that have the power to impose conditions on relicensing,[49] and require FERC to adopt interim conditions to avoid adverse environmental impacts. FERC should also make more effective use of the authority specified in its existing regulations to include in annual licenses additional or revised interim conditions to address adverse impacts on the environment.[50]

I. Reduce The Length Of License Terms, And Require More Flexible Conditions, Including Adaptive Management And "Reopener" Provisions.

The terms of subsequent licenses are too long. FERC generally grants subsequent licenses for 30 to 50 years. Because licenses currently last for a generation, and thus often foreclose subsequent consideration of changes in societal values, scientific knowledge, and technologies or methodologies, the stakes in relicensing for resource protection and operational criteria are extremely high. Consequently, Congress should consider amending the Federal Power Act to shorten the terms of subsequent licenses to a maximum 15-year period.

Similarly, fixed conditions in 30 to 50 year licenses become scientifically indefensible long before expiration. The environmental impacts of a hydropower project on the environment 30 to 50 years hence cannot be determined at the time the license is issued. If the license terms are not significantly shortened, FERC should incorporate adaptive management requirements and "reopener" provisions into licenses. That practice would serve to reduce the time and cost of obtaining a license because some studies and corresponding operational changes will be ongoing, and therefore need not be completed prior to the issuance of a license.

J. Consolidate Licenses On A Watershed Basis.

Many major California river systems have multiple FERC-licensed hydropower projects with varying license expiration dates. The basic physical and ecological functions of rivers can only be understood at the watershed scale. Relicensing regulations only require in-depth scientific studies for the years immediately preceding a license expiration, and then only for the area immediately impacted by the project. State and federal resource agency environmental scientists are hard-pressed to make decisions and recommendations that can directly and indirectly affect downstream parts of a watershed when only a small portion of the needed data and analyses are available.

---

[49] It is California's position that states have this authority, but FERC refuses to recognize it.

[50] 18 C.F.R., section 16.18.

FERC's policy of rigidly adhering to original issuance dates, and 30 to 50-year multiples thereafter, is antiquated and does not conform with the tenets of modern ecological science. Most of California's major natural resource management and restoration initiatives are conducted at a watershed scale. These include the CALFED Bay-Delta Program to restore San Francisco Bay-Delta water quality, aquatic habitats, and anadromous fisheries, to increase water supply, and to improve forestry management and timber harvest practices.

The following are examples of major California rivers with multiple FERC-licensed hydropower projects and varying license dates. The projects are listed in order of their position in the watershed, beginning with the highest elevation project.

River	Project	Owner	Expires
Feather River			
FERC 2105	Upper NF Feather River	PG&E	2004
FERC 1962	Rock Creek-Cresta	PG&E	1982
FERC 2107	Poe	PG&E	2003
FERC 619	Bucks Creeks	PG&E	2018
FERC 2100	Feather River	DWR	2007
Pit River			
FERC 2687	Pit 1	PG&E	1995
FERC 2661	Hat Creek	PG&E	2000
FERC 233	Pit 3,4,5	PG&E	2003
FERC 2106	McCloud-Pit 6, 7	PG&E	2011
Kern River			
FERC 2290	Kern 3	SCE	2026
FERC 382	Borel	SCE	2005
FERC 8377	Isabella	Isabella Partners	2038
FERC 1930	Kern 1	SCE	2028
FERC 178	Kern Canyon	PG&E	2005
FERC 4129	Rio Bravo	Olcese Water Dist.	2033

K. Promote And Facilitate Efforts To Develop Alternative Hydropower Technologies And Optimize Electricity Production From Existing Hydro Projects.

California would like to work cooperatively with FERC to develop policies

and practices that would promote and facilitate the implementation of alternative hydropower technologies that can be added to extant dams, conduits and canals. California's water supply system has hundreds of potential sites where such technologies could be applied. FERC regulations on review for even the smallest and most environmentally benign of these alternative technologies has become a barrier to the rapid deployment of promising technological innovations.

Instead of promoting the relaxation of environmental standards to increase hydroelectricity production as was done in FERC's "Removing Obstacles" order, California believes that FERC should work to promote efficiency upgrades and other measures to optimize the electricity production of existing hydropower facilities.

L. Develop Better Data On Relicensing Time And Cost Relative To Environmental Impacts And Energy Benefits.

FERC should develop a data collection and management system on FERC-licensed projects and relicensing that will provide the data needed for informed decisions about relicensing reforms. We encourage FERC to work cooperatively with environmental and energy agencies in California and other states in compiling the data and conducting analyses on factors that affect the time and cost of obtaining new hydropower licenses.

Specifically, relicensing data should be dis-aggregated by project size, relicensing phase, and issue categories that include process versus substance, NEPA, water quality issues, endangered species issues, recreation issues, and study adequacy issues. Data on Clean Water Act section 401 and Federal Power Act section 4(e) mandatory conditions should also be compiled. FERC should also develop economic analysis methods and procedures for hydropower projects that better address non-market or non-generation resource values in order to achieve better balance in FERC decision making.

If FERC is going to delve into the cost aspects of relicensing, cost data must be collected and compiled in a uniform, statistically valid manner. Self-selected, self-reported data are misleading at best. Data on the environmental quality benefits and gains from relicensing should be compiled in a manner that allows for consistent summation and comparison across project types and sizes, regions and issues.

Lastly, FERC should provide more qualitative information on the reasons behind the delays. The 603 Report tends to frame most reasons for delay as the result of unreasonable agency or stakeholder demands and positions. This biased presentation of the issues diminishes the gravity of disputed natural resource issues, and minimizes the role of licensees in creating undue delay.

M. Facilitate Continued Implementation Of Existing, Collaborative Efforts To Reform The Relicensing Process.

There has been a significant effort and commitment of resources over the past several years by agencies (state and federal), industry representatives, and non-governmental organizations in several processes (Interagency Task Force and the National Review Group) to improve the

relicensing process. We should not abandon the results of these reform efforts to develop a streamlined and more mutually efficient way to conduct the business of relicensing without sacrificing environmental protection. California strongly encourages FERC to work cooperatively with California and other states to craft reforms that respect state policy objectives, priorities, and extant authorities. We should implement the results of these mutual reform efforts. Any legislative action that voids or avoids these collaborative efforts is premature.

N. Provide States With Broader Authority To Apply And Coordinate Their Water Quality And Water Right Procedures To FERC-Licensed Hydropower Projects.

Water quality certification is an important tool, but by itself does not fully address the states' interest in effectively managing their water resources. Congress should also authorize states to exercise their water right authority over FERC-licensed projects.

Relicensing would be expedited, and state/federal relations would be improved, if the states were permitted to apply their water right authority to FERC-licensed projects. As a matter of policy, California prefers to address the water quality impacts of water development projects as part of its water right authority, believing that water right procedures provide the best tool for addressing the proper balance between water supply needs and the protection of instream beneficial uses. Use of the state's water right authority also promotes adaptive management. Under the public trust doctrine, the state has continuing jurisdiction, allowing it to adjust its water right requirements as needed to make efficient use of its water resources while retaining the ability to respond to adverse impacts on the environment.

The Supreme Court has recognized that preemption of states' water rights authority may not have been Congress' original intent in enacting the Federal Power Act. However, on the grounds of *stare decisis*, it refused to revisit the issue, and held that California could not use its water right authority to address instream flows or other water quality issues for FERC-licensed hydropower projects.[51] Congress should revisit the issue, and restore states' water rights authority. If California had independent authority to address the water quality impacts through its administration of water rights, the state would rely more on that authority, and less on water quality certification, to the benefit of both the FERC licensing process and the state's control over its own water resources.

VIII. CONCLUSION

California respectfully requests that Congress reject FERC staff's recommendations in the 603 Report, and consider California's constructive recommendations for improving the hydropower relicensing process.

IX. AUTHORS

California's Response to the FERC 603 Report has been prepared by a team of legal, technical and policy staff from the California Resources Agency and California Environmental

[51] *California v. FERC* (1990) 495 U.S. 490.

Protection Agency. The team's lead authors are listed below.

California Resources Agency

Matthew R. Campbell
Deputy Attorney General
Counsel to the Resources Agency
Office of the Attorney General
1300 I Street
Sacramento, CA 95814
Phone: (916) 327-2477
e-mail: Matt.Campbell@doj.ca.gov

Jim McKinney
Manager, Resources Agency Hydro Team
C/o California Energy Commission
1516 Ninth Street, MS 15
Sacramento, CA 95814
Phone: (916) 654-3999
e-mail: jmckinne@energy.state.ca.us

California Environmental Protection Agency

Andrew H. Sawyer
Assistant Chief Counsel
California State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
phone: (916) 341-5191
e-mail: asawyer@exec.swrcb.ca.gov

Jim Canaday
Senior Environmental Scientist
FERC Licensing Team Supervisor
California State Water Resources Control Board
Division of Water Rights
1001 I Street, 14th Floor
Sacramento, CA 95814
phone: (916) 341-5308
e-mail: jcanaday@waterrights.swrcb.ca.gov